

Certificate of Analysis

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Product Name: PEI STAR™ transfection reagent

Catalog No.: 7854

Batch No.: 7

CAS Number: 49553-93-7

IUPAC Name: Poly[imino(1,2-ethanediyl)] hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance: White solid

Storage: Store at RT

2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Performance: Pass

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

PEI STAR™ is a chemically-defined, high-performance polyethylenimine (PEI) transfection reagent for cost-effective, affordable and scalable transient gene expression. PEI is a synthetic polymer with an exceptionally high positive charge density in pH-neutral solutions. Positively charged PEI binds strongly to negatively charged DNA and imparts a net cationic charge, allowing the DNA to enter cells. PEI is a non-viral vector commonly used to transfect HEK293 and CHO cells. Applications include production of recombinant proteins, antibodies and viruses. Pre-dissolved, ready-to-use formulation of PEI STAR™ also available: PEI STAR-G... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

Physical Appearance: White solid

Storage: Store at RT

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Han et al (2021) Aberrant role of pyruvate kinase M2 in the regulation of gamma-secretase and memory deficits in Alzheimer's disease. *Cell Rep.* **37** 110102. PMID: 34879266.

Trivedi et al (2021) Comparison of highly pure rAAV9 vector stocks produced in suspension by PEI transfection or HSV infection reveals striking quantitative and qualitative differences. *Mol. Ther. Methods Clin. Dev.* **24** 154. PMID: 35071688.

Huang et al (2013) AAV2 production with optimized N/P ratio and PEI-mediated transfection results in low toxicity and high titer for *in vitro* and *in vivo* applications. *J. Virol. Methods* **193** 270. PMID: 23791963.

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